

LOL-WDT-IR-31

Ref: “Are there any utilities that offer utility-owned, operated and maintained CHP? Austin Energy ... installs, operates and maintains customer-sited DG and CHP.” (HECO T-1, page 20 of 37) “In order for a form of DG to be ‘feasible and viable’, it must be (1) technically feasible, (2) commercially available, ... Technically feasible: when that technology has been built, tested, and considered as a proven technology by industry peers. 2) Commercially available ... Prototype equipment would not be commercially available. (HECO T-1, page 7 of 37)

“June 14, 2004 News Media Release: Austin Energy to Test Innovative On-Site Generation Austin Energy and Department of Energy (DOE) officials cut the ribbon today on a prototype power plant that could revolutionize on-site generation for businesses. The plant, called a cooling-heating-power (CHP) facility, will be the largest in the world to test a new technology approach: using the waste heat exhaust from a natural gas-fueled generator as the only fuel source for a chiller that provides air conditioning and heating. The plant is located at the Domain Industrial Park in north Austin. ... The 4.5-megawatt (MW) Domain CHP plant is one of six DOE research projects nationwide involved in testing innovative distributed generation technology.”

www.austinenergy.com/About%20Us/Newsroom/Press%20Releases/2004/onsiteGeneration.htm
[emphasis added]

Question: (1) What does HECO believe is the relationship between the following two statements (a) one mainland community-owned electric utility is installing one prototype CHP unit, and (b) HECO, a Hawaii-based Independently Owned Utility (IOU), wants to be the first IOU that gets into the small, on-site business CHP market? (2) Can mainland examples be transferred and adopted in Hawaii?

HECO Response:

1. The IR has mischaracterized the Austin Energy CHP program as having installed only one prototype CHP facility. According to Mr. Larry Alford, Austin Energy Manager of Distributed Generation, Austin Energy has been developing its CHP/DG program since the mid-1990s. Including the Domain CHP facility described in the Austin Energy press release, the Company has two CHP facilities in operation, one DG facility in operation, and one CHP facility under development. These are as follows:

- 200 kW CHP facility using a phosphoric acid fuel cell in operation at a hospital,

- 4.5 MW CHP facility (Domain) using a gas fired combustion turbine in operation at a manufacturing facility,
- 1 MW DG facility using digester gas in operation, and
- 2.5 MW CHP facility using a gas fired combustion turbine under development at a hospital.

The focus of Austin Energy's press release concerning the Domain CHP plant is on the innovative technology being demonstrated, specifically the use of a massive 2,500 ton absorption chiller that would be capable of operating on waste heat alone without supplemental fuel. As stated in the press release:

Recycling waste heat to power another generator or to help run a chiller is not new. What is new is for a chiller this size to be fueled by waste heat alone - without any supplemental fuel. The project's chiller, called an absorption chiller, is capable of delivering 2,500 tons of chilled water -- sufficient to air condition 1,000,000 square feet of office space, equivalent to roughly 8,000 homes.

Austin Energy is in the process of developing a set CHP tariff. In the meantime, they are using customer contracts that follow the same structure as the proposed HECO Utilities CHP Program, that is, providing an electric discount, a facility fee, and a thermal fee.

For details on why HECO is focused on offering CHP to customers on a regulated basis, see HECO T-1, HECO Participation in CHP, pages 15-21.

2. Hawaii is unique, and factors unique to an island-based utility system with limited fuel choices and without interconnection to neighboring utilities, must be considered in "translating" mainland experience to Hawaii. Given Hawaii's uniqueness and energy policy objectives, the Companies' development of a CHP program, and their active participation in the CHP market, are particularly appropriate.

LOL-WDT-IR-32

Ref: 'The Companies' view of the CHP market has evolved over the past 4 to 5 years.' (HECO T-1, page 21 of 37). Question: (1) Is HECO using the term 'evolved' correctly? HECO objected to on-site CHP 5 years ago, and now supports it. (2) Isn't this an about-face, a revolution, rather than a slow evolution?.

HECO Response:

Evolution is the process of development or change. As described in Appendix C of its CHP Program application in Docket No. 03-0366, the Companies' position on CHP did in fact develop and change over the past several years.

LOL-WDT-IR-33

Ref: “Q. Would preventing the Companies’ from participating in the CHP market as a regulated entity enhance competition? A. No. This would do the opposite. You would eliminate a CHP alternative that is attractive to the host customer and also provides benefits to other non-participating customers. Ultimately, the customer has fewer choices.” (HECO T-1, page 30 of 37).

Comments: The Department of Justice’s Horizontal Merger Guidelines (1992) uses the Herfindahl-Hirschman Index (HHI) as a measure of market concentration. HECO referenced the HHI in the recently completed PUC Docket No. 96-0493.

Question: (1) DOES HECO disagree with the DOJ Guideline which uses market concentration and not customer attitudes/desires in analyzing whether competition will be enhanced as a result of proposed business ventures? (2) What is the current HHI level within Hawaii’s CHP market? (3) What HHI level does HECO propose for Hawaii’s CHP market? (4) Doesn’t HECO’s CHP Application envision a high HHI?

HECO Response:

1-4. In general, effective competition may be feasible if the market structure is such that an individual seller is not able to influence the price of the service as a result of factors such as 1) the number of sellers, 2) the size of each seller’s share of the market, 3) the ability of sellers to enter or exit the market, and 4) the price and availability of comparable substitutes for the service.

For the calculation of the Herfindahl-Hirschman Index (“HHI”), a measure of industry concentration, one needs to know the percentage share of each firm in the industry. The HECO Utilities currently have a zero share of the CHP market, and do not know the percentage share of such market participants as Hess Microgen LLC, Johnson Controls, Inc., Hawthorne Pacific, Corp., and NORESKO, nor know how many other energy service companies there are in Hawaii capable of supplying and/or installing CHP systems and their respective percentage share of the market. A calculation of the HHI Index for the CHP market in Hawaii is therefore not possible at this time.

LOL-WDT-IR-34

Ref: “The positive externalities of distributed generation include the following ...: (HECO T-1, page 34 of 37).

Question: Do positive externalities include price stability; balance of trade issues; and decreasing the leakage of money from the state economy.

HECO Response:

Economic impacts of DG may be considered as externalities. See response to LOL-SOP-IR-71, for example. The Companies would not support blanket statements regarding the positive (or negative) association between all forms of DG and “price stability; balance of trade issues; and decreasing the leakage of money from the state economy”. See for example, the response to HREA-HECO-T-1-IR-4 regarding balance of trade and “export” of money from the state economy.

LOL-WDT-IR-35

Ref: "Does HECO have experience with PV in Hawaii?" (HECO T-2, page 2 of 26, line 21)

Question: (1) Do all 22 PV systems that HECO, MECO & HELCO have experience with total less than 100 kW capacity and less than 0.01% of the peak load?

HECO Response:

Yes.

LOL-WDT-IR-36

Ref: "HECO, HELCO and MECO install PV systems as part of the SPS program?"
(HECO T-2, page 3 of 26, lines 23-24)

Question: (1) What is the total cost (including costs that were paid by others) of all of these systems combined? (2) What is the average cost per installed kW?

HECO Response:

1. The total cost of grid-connected PV systems installed under the HECO, HELCO, and MECO Sun Power for Schools program is \$469,766 (including hardware, installation, data acquisition system, utility in-kind support, and other costs).
2. The average installed cost on a consolidated basis is \$20,425 per kW (including hardware, installation, data acquisition system, utility in-kind support, and other costs).

LOL-WDT-IR-37

Ref: "What are the land requirements for large (> 100 kW) PV systems? A. Large PV systems would require about 5 to 10 acres per MW of relatively flat land in a sunny area." (HECO T-2, page 5 of 26, lines 9-11) Question:

Question: (1) Are there 100+ kW systems in Hawaii? (2) Are any of them on the ground? (3) Did HEI's Auditor, KPMG, find that solar could provide 75% of The Netherlands electrical needs? (4) Did the above referenced study find that rooftop solar could provide over 25% of The Netherlands electrical needs?

HECO Response:

1. Yes. There are several PV systems greater than 100+ kW on the Big Island.
2. Yes. One of the PV systems at the Mauna Lani Hotel, and the Parker Ranch system are ground-mounted.

3. KPMG LLP's Hawaii Office, Independent Certified Accountant, is HEI's auditor.

HECO assumes that LOL is referring to the study by KPMG's Economic Research and Policy Consulting company, not the KPMG accounting company, commissioned by Greenpeace Netherlands to conduct a study into the feasibility of producing solar panels (photovoltaic) on a large scale (completed in August 1999). HECO has not cited the study as a reference, and has not relied upon the study. However, HECO is familiar with the KPMG Greenpeace Netherlands report which states: "Solar energy is a sustainable and clean source of energy. Solar energy also holds promise for the future of electricity production, however the use of solar energy in contrast to the use of conventional energy is still very limited. The predominant reason for this is that the demand for solar energy and solar energy panels (photovoltaic) is small and the associated prices are high."

The reported major conclusions of the KPMG Greenpeace Netherlands report are:

"Scaling up the production of solar panels is technologically feasible using current technology;

to achieve a reduction in price to the level of conventional energy, production needs to be scaled up to 500MW per year; and there are costs involved in creating the required market size, and either the industry, or the government, or the users of energy will have to pick up the cost of transition.”

The KPMG Greenpeace Netherlands report mentions a University of Utrecht study on possibilities for solar energy. The University of Utrecht study presented an estimate that solar panels on dwellings, offices and buildings, other places besides roofs (i.e., fallow agriculture lands, industrial and harbour areas, land adjacent to airports, sound screens next to highways and railway lines) technically could provide 74% of The Netherlands electrical needs.

The University of Utrecht study also presented an estimate that solar panels on dwellings and non-residential buildings technically could provide more than 25% of energy consumed in the Netherlands. (It is unclear if the University of Utrecht assessment was based on all roof surfaces; thus solar panels on the north facing slope or in the shade of other buildings would not operate at an efficient level.)

LOL-WDT-IR-38

Ref: “Neighbors of distributed wind turbine systems may have concerns with aesthetics and potential obstructions to view.” (HECO T-2, page 16 of 26, lines 15-16) Question: Please name all fact-based Hawaii-specific documents that support this position for Hawaii-based wind facilities. (Do not include generalized documents that guess that such a statement might be true).

HECO Response:

HECO has not conducted any specific analyses of visual impact of wind turbines. However, the State Department of Land and Natural Resources response to a proposed Air Force wind project at Kaena Point raised concerns over visual impact (see HECO response to LOL-SOP-IR-75).

LOL-WDT-IR-39

Ref: “Commercial wind farms, located in remote areas rich in wind resource, may require new power lines if located away from existing infrastructure.” (HECO T-2, page 18 of 26, lines 4-5)

Question: Please list all proposed Hawaii-based wind farms that are not close to existing infrastructure.

HECO Response:

The proposed wind farm at Upolu Point on the Big Island will require new poles and conductors to interconnect with the electrical grid.

LOL-WDT-IR-40

Ref: “The following renewable DG technologies are not feasible and viable for Hawaii.” (HECO T-2, page 21 of 26, line 26)

Question: Lava flow watchers who travel to the end of the road in Volcano National Park and then walk towards the lava flows can ‘find’ the way back to the road by a blinking light powered by solar. The sign at the solar site states that this solar-powered light is powered by HELCO. (1) Is this light an example of feasible and viable micro DG? (2) Would this facility make your list of feasible and viable DG as found on pages 21-22 of your testimony?

HECO Response:

1. As stated in HECO T-2, page 20, PV for off-grid applications is feasible. The economic viability of off-grid PV installations is site-specific. The solar-powered light that is referred to above was donated by HELCO to the Volcano National Park after the completion of a Utility Photovoltaic Group (UPVG, currently known as the Solar Electric Power Association) project to demonstrate off-grid PV lighting.
2. Yes. HECO T-2, page 20, states that PV for off-grid application is feasible.

LOL-WDT-IR-41

Ref: "Q. What is the state energy policy in Hawaii? A. The state energy policy has four objectives: 1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people; 2) Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased; 3) Greater energy security in the face of threats to Hawaii's energy supplies and systems; and 4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use." (HECO T-2, page 22 of 26, lines 5-14)

Question: For each objective, do renewables or fossil fuels achieve the objective better? Please elaborate.

HECO Response:

It is HECO's position that a mix of resources and technologies, including central station generation, distributed generation, conservation and energy efficient and renewables, are best suited to meet the State's energy objectives.

LOL-WDT-IR-42

Ref: "Q. What is the state energy policy in Hawaii? A. The state energy policy has four objectives: 1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people; 2) Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased; 3) Greater energy security in the face of threats to Hawaii's energy supplies and systems; and 4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use." (HECO T-2, page 22 of 26, lines 5-14)

Constitution of the State of Hawaii, as amended in 1978:

Article XI. Section 1. For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people. [Add Const Con 1978 and election Nov 7, 1978]

Constitutional Convention of 1978:

"Your Committee on Environment, Agriculture, Conservation and Land ... begs leave to report as follows ... The consensus of your Committee with regard to self-sufficiency was to constitutionally recognize the growing concern and awareness of Hawaii as being overly dependent on outside sources for, among other resources, food and energy. Your Committee spent much time considering the need for a separate section on an energy policy for the State. However, it was concluded that the promotion of energy conservation, the development of clean, renewable sources of energy, and the achievement of increased energy self-sufficiency would be adequately covered by the provisions of this section." [emphasis added] (1978 Constitutional Convention's Committee on Environment, Agriculture, Conservation and Land's Standing Committee Report ("SCR") No. 77)

Question: (1) Does HECO believe that the constitutional phrasing puts greater weight on one or more of the requirements of the Hawaii State Plan? (That is, are one or more subsections authorized not only by HRS but also by the Constitution?)

HECO Response:

HECO believes that the State energy policy is a balance of the four stated objectives.

LOL-WDT-IR-43

Ref: "In general, a RPS is designed to require that a specified percentage of the electricity sold by electric utilities be generated from renewable sources such as wind, solar, geothermal, hydropower, biomass and other renewable resources by a specified date." (HECO T-2, page 23 of 26, lines 11-14)

Question: The Companies sell electricity that is generated from renewable and from non-renewable generators. What percentage of the electricity generated is generated from renewable energy generators? That is, what is the percentage of the electricity that the Companies sells is generated by renewable energy facilities. (Please do not answer the question (1) by including electricity not sold by the utility, or (2) by including systems which do not generate electricity, or (3) by including systems which do not export electricity to the grid)

HECO Response:

The HECO Utilities' RPS percentage reported for 2003 was 8.40%. Excluding non-generating sources of renewable energy (i.e., solar water heating and heat pumps) the percentage is 6.66%.

LOL-WDT-IR-44

Ref: "In general, a RPS is designed to require that a specified percentage of the electricity sold by electric utilities be generated from renewable sources such as wind, solar, geothermal, hydropower, biomass and other renewable resources by a specified date." (HECO T-2, page 23 of 26, lines 11-14)

Question: On average, what percentage of the electricity traveling through The Companies T&D grid is generated from renewable energy resources?

HECO Response:

See HECO response to LOL-WDT-IR-43.

LOL-WDT-IR-45

Ref: "In general, a RPS is designed to require that a specified percentage of the electricity sold by electric utilities be generated from renewable sources such as wind, solar, geothermal, hydropower, biomass and other renewable resources by a specified date." (HECO T-2, page 23 of 26, lines 11-14)

Question: (1) Is the RPS percentage calculated by
 $[(A1 + A2 + A3 + A4) / (A1 + B)] \times 100$

where

A1 = Grid-Connected Renewables

A2 = On-Site Renewables

A3 = Efficiencies

A4 = DG/CHP Heat

B = Grid-Connected Fossil Fuels

(all measured in actual, estimated or avoided MWh)

(2) If not, please give the formula that HECO would advocate. (3) Is it really a percentage when the numerator contains units that do not appear in the denominator? (4) Can the RPS 'percentage' exceed 100%?

HECO Response:

1. No. See response to part 2. below.
2. Act 95 of the 2004 Hawaii State Legislature, which revised Hawaii's RPS law, defines renewable energy as "electrical energy produced by wind, solar energy, hydropower, landfill gas, waste to energy, geothermal resources, ocean thermal energy conversion, wave energy, biomass, including municipal solid waste, biofuels, or fuels derived from organic sources, hydrogen fuels derived from renewable energy, or fuel cells where the fuel is derived from renewable energy". Act 95 further defines renewable energy as "electrical energy savings brought about by the use of solar and heat pump water heating, seawater air conditioning district cooling systems, solar air conditioning and ice storage, quantifiable energy conservation measures, use of rejected heat from co-generation and combined heat and

power systems excluding fossil-fueled qualifying facilities that sell electricity to electric utility companies, and central station power projects'. The HECO Utilities plan to calculate the RPS percentage in the future using the formula:

$$\text{RPS \%} = (\text{Renewable Energy}) / (\text{Electricity Sales})$$

Where renewable energy is defined as stated in Act 95, which would exclude on-site renewable energy sources for customers that are off-grid.

3. Both the numerator and the denominator are expressed in units of energy (i.e., megawatt-hours), therefore HECO does not understand this question.
4. Practically speaking, given the current level of electrical energy from renewable energy, quantifiable energy efficiencies, and rejected heat from co-generation and CHP, it would be very difficult for the RPS percentage to exceed 100%.

LOL-WDT-IR-46

Ref: "The goal of the RPS is to ultimately reduce the use of fossil fuels." (HECO T-2, page 24 of 26, line 10)

Question: (1) Is it better to save part of the barrel (say resids) or the whole barrel (lights, mediums, and heavies)? (2) Would saving more of one distillate relative to other distillates lead to the oversupplies or undersupplies of various distillates, and therefore fail to actually decrease the number of barrels needed? (3) Since the ultimate goal is the reduction in the number of barrels needed, does Hawaii's RPS law include fossil fuel saved by all quantifiable energy conservation measures (buildings, vehicles, electricity, transportation)? (4) Does Hawaii's RPS law have a benchmark year from which to measure savings in energy used, that is, from what year should savings from quantifiable energy conservation measures be initiated.

HECO Response:

1. Whether it would be better to reduce the consumption of one petroleum product versus another, or the "whole barrel" would depend on the resulting effect that one action would have relative to the other. For example, whether reduction in the local use of one product would result in the export of the product, whether another local use for the product exists, or if it then becomes feasible to import refined products or other energy sources (e.g., liquefied natural gas). Petroleum refining and product markets are very complex and in the absence of specific information on the effects of one action relative to the other, in general, the reduction in consumption of any fossil fuel through reasonable actions would be preferred.
2. See HECO response to part 1. above.
3. Act 95 of the 2004 Legislature, which updated the RPS law, is applicable to electric utilities as defined in HRS 269, therefore it specifically pertains to the electricity sector.
4. Act 95 of the 2004 Legislature set the years for the RPS requirements as 2003, 2005, 2010, 2015, and 2020. Accordingly, the energy efficiencies that are quantifiable for those years can be included in the calculation of the RPS percentage.

LOL-WDT-IR-47

Ref: “The Legislature took a big picture view and recognized the benefits of saving energy. That’s why the RPS law expanded the definition of renewable energy to include the energy saved from efficient generation technologies such as combined heat and power, as well as district cooling, ice storage and energy conservation measures.” (HECO T-2, page 24 of 26, lines 15-19)

Question: (1) Does Hawaii’s RPS law include all barrels of oil saved? (2) Does this include savings from both the transportation & electricity (“T&E”) sectors?

HECO Response:

1. The Hawaii RPS law pertains to the percentage of renewable energy that an electric utility must use. It does not specify the type of oil saved.
2. See HECO response to LOL-WDT-IR-46, part 3.

LOL-WDT-IR-48

Ref: “The federal government offers investment tax credits for wind and geothermal.” (HECO T-2, page 24 of 26, line 22)

Question: Are there any energy fuels which are not subsidized by the government? If the first part is answered in the affirmative, please identify the fuel and explain how it was determined that the fuel is not subsidized.

HECO Response:

HECO objects to this information request as it is overly broad and not directly related to the issues in this proceeding. Also, HECO does not understand what LOL means by the use of the term “subsidized by the government”.

LOL-WDT-IR-49

Ref: "HECO, HELCO and MECO have a strategy to increase renewable energy development in Hawaii." (HECO T02, page 25 of 26, lines 13-14)

Question: (1) The electricity that currently travels through The Companies grid is derived from fossil fuel generators and renewable energy facilities. Do the utilities expect that the ratio of renewable electricity divided by total electricity traveling through the Companies' grid will increase in the future? Please elaborate. (2) Is your strategy to define efficiencies and fossil fuels as renewables and then increase the amount of non-grid fossil fuel derived renewables and other efficiencies?

HECO Response:

1. As stated in HECO T-2's exhibit HECO-201, HECO's has a multi-pronged approach to increasing the future use of renewable energy and if all of its efforts are successful, it is possible for the ratio of electricity from renewable energy to electricity sales to increase in the future. However, the ability to increase the ratio of electricity from renewable energy to electricity sales is not only a function of the amount of renewable energy, but also highly dependent on the future growth in electricity sales. If electricity sales grows at a faster rate than electricity from renewable energy, then the ratio would decrease, which further illustrates the importance of energy conservation measures.
2. HECO, HELCO and MECO's strategy is to pursue all cost-effective renewable energy resources.

LOL-WDT-IR-50

Ref: "In order for a DG installation to be considered firm capacity, the utility should be able to control the operations and maintenance quality of the installation." (HECO T-3, page 2 of 22, lines 20-22)

Question: (1) Does maintaining control over maintenance require utility ownership and utility maintenance? (2) Does HECO maintain Transmission Lines by hiring subcontractors? (3) Could third-party-owned facilities ever provide firm power to the utility?

HECO Response:

- a. No, not necessarily. Hypothetically, there could be some contractual basis for requiring that sound operations and maintenance policies and procedures are in place and enforcing that they are followed. However, the only agreements that the Companies have with DG owners and/or operators that do not export power to the grid are interconnection agreements, which address interconnection issues, and do not impose availability or maintenance requirements for the generators. See HECO response to COM-HECO-DT-IR-27.
- b. Historically, only HECO has been performing maintenance on transmission lines. HECO is considering using contractors on selected transmission maintenance activities in the near future.
- c. Please see HECO response to COM-HECO-DT-IR-19.

LOL-WDT-IR-51

Ref: “Has HECO identified the need for new firm generating capacity? A. Yes, it has. On Oahu ...” (HECO T-3, page 7 of 22, lines 6-7) & “HECO has an urgent need for firm generating capacity.” (HECO T-6, page 4 of 13, lines 18-19).”

Question: (1) Will HECO upgrades (generator overhauls, etc) increased the capacity of existing utility-owned generations on Oahu? By how much? (2) Are Oahu-based Independent Power Producers increasing or planning to increase the capacity of their QFs? If so, by how much? (3) Does this urgent need take into account current IPP expansion plans? (4) What is the expected capacity increase for H-POWER and for Kalaeloa?

HECO Response:

(1) No, they will not. Maintenance, overhauls or upgrades performed on existing utility-owned generating units help maintain the capacity or improve the reliability of the units. Also, new technologies, such as state-of-the-art controls, are frequently installed on the units during planned outages.

(2) HECO is negotiating with Kalaeloa Partners, L.P. regarding its proposal to provide additional capacity (up to 29 MW) from its existing 180 MW power plant.

HECO is considering the possibility of obtaining from AES Hawaii additional energy on an as-available basis above its current 180 MW committed capacity level, and has had some discussion with AES Hawaii.

HECO has not received any formal proposal from H-Power for additional capacity. It is HECO’s understanding that H-Power is considering the addition of a third boiler to improve the reliability of the unit.

(3) Yes, it does.

(4) Please see response to part (2) above.

LOL-WDT-IR-52

Ref: "The amount of fossil fuel reduction that might be achievable in Hawaii through the use of distributed generation depends ..." (HECO T-3, page 20 of 22, lines 23-24)

Question: (1) Is it accurate to say that the total amount of fossil fuels that The Companies are anticipating that they will need will increase -- regardless of whether a particular generator decreases its fossil fuel needs? (2) How will the goals of the State Energy Plan be achieved if the total use of fossil fuels for electricity trends upwards into the foreseeable future?

HECO Response:

- (1) The HECO Utilities project that energy efficiency programs, CHP and renewable energy will make increasing contributions to meeting consumer energy needs in the future. The HECO Utilities also project that fossil-fueled generation will also continue to play a key role in meeting consumer energy needs.
- (2) The four objectives of state energy policy are described in HECO T-2, page 22. In addition, the State's updated RPS law is described in HECO T-2, pages 23-24. Over time, with increasing electrical use, it is possible that the total use of fossil fuels will trend upwards. However, simply measuring the "after energy savings" use of fossil fuels ignores the reduction of fossil fuels consumption due to efficient generation technologies such as combined heat and power, as well as district cooling, ice storage and energy conservation DSM measures.

LOL-WDT-IR-53

Ref: “Hawaii’s electric utilities cannot just be in the business of offering central station generation, as they have been told ... by regulators” (HECO T-6, page 3 of 13, lines 18-20)

Question: Name all specific citations where utility regulators have informed The Companies that they cannot just be in the business of offering central station generation.

HECO Response:

The general basis for the referenced statement arises from policies such as those in the Commission’s IRP Framework, Section II.B., Governing Principles (Statements of Policy), subpart 3., which states:

Integrated resource plans shall be developed upon consideration and analyses of the costs, effectiveness, and benefits of all appropriate, available, and feasible supply-side and demand-side options.

LOL-WDT-IR-54

Ref: "These are all utility objectives. Installing, owning, operating and maintaining CHP as a regulated utility will substantially further all of these objectives." (HECO T-6, page 4 of 13, lines 2-4)

Question: What other Independently Owned Utilities (IOUs) has established a proven record of installing, owning, operating and maintaining DG/CHP facilities?

HECO Response:

Please see the response to COM-HECO-DT-IR-1.

LOL-WDT-IR-56

Ref: "... some customers may install third-party CHP systems rather than continue to wait for regulatory proceedings to conclude in 'due course'." (HECO T-6, page 5 of 13, lines 11-13)

Question: Hasn't HECO also said that they may request regulatory approval of specific CHP units without waiting for regulatory decisions in this docket?

HECO Response:

HECO (and HELCO and MECO) has stated that they plan to file applications for approval of contracts entered into under Rule 4 of their respective tariff for the installation of CHP projects on a customer-by-customer basis. See HECO T-6, page 5, line 21, to page 6, line 19.